

G01N033-531

ICA A61K039-395; C12Q001-68

ICI C12P021-08, C12R001:19

AB EP 368684 A UPAB: 19970612

The following are claimed: (A) a single domain ligand comprising of at least part of the variable domain of one chain of a molecule from the **immunoglobulin** (Ig) superfamily; (B) a receptor comprising a ligand as in (A) linked to one or more of an effector molecule, a prosthetic gp., a label, a solid support of other ligand(s) having the specificity; (C) a method of cloning a sequence (the target sequence) which encodes at least part of the variable domain of an Ig superfamily molecule.

USE/ADVANTAGE - Cloning method allows for the production of monoclonal antibodies (MAbs) and bispecific antibodies and provides an alternative to hybridoma technology. The species specific primers can be used to clone pref. antibody specificity from that species without sequencing the target sequence. The ligands have equivalent binding affinity to that of complete Ig molecules and can be used in e.g. therapy (e.g. treating cancer, bacterial and viral diseases), in diagnosis, in vaccination, in modulation of activities of hormones or growth factors, in detection, in biosensors and in catalysis. The receptors can also be used in diagnosis and therapy. @ (52pp Dwg.No.0/22)

FS CPI

FA AB

MC CPI: B04-B04A1; B04-B04C5; B04-B04C6; J04-B01B; J04-E

ABEQ EP 368684 B UPAB: 19940421

A method of cloning sequences (target sequences) each containing a sequence encoding at least part of an **immunoglobulin** variable domain, which method comprises providing a sample repertoire of nucleic acid containing target sequences, and using forward and back primers in the process of copying and cloning of the target sequences for expression of a repertoire of proteins each comprising at least part of an **immunoglobulin** variable domain, the forward primer being specific for a sequence at or adjacent the 3' end of the sense strand of each of the target sequences, the back primer being specific for a sequence at or adjacent the 3' end of the antisense strand of each of the target sequences.

Dwg.0/23

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(FILE 'HOME' ENTERED AT 13:35:48 ON 04 MAR 2004)

SET COST OFF

FILE 'HCAPLUS' ENTERED AT 13:35:55 ON 04 MAR 2004

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E IGG/CW
L1      1 S E3
        E IGG/CT
        E E3+ALL
L2      30158 S E2
L3      57726 S IGG
L4      64123 S L2,L3
        E A4B4L1FR
        E A4B4
        E S28R
L5      0 S L4 AND E3
L6      0 S L4 AND ?S28R?
L7      2 S L4 AND S28
L8      0 S L4 AND ?A4B4?
L9      0 S L4 AND ?B4L1?
        E DALL ACQUA W/AU
L10     17 S E4

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E DALLACQUA W/AU
 E DALL A/AU
 E ACQUA/AU
 L11 1 S E13
 E JOHNSON L/AU
 L12 131 S E3
 E JOHNSON L S/AU
 L13 16 S E3-E7
 E JOHNSON LESLIE/AU
 L14 25 S E3,E12
 L15 5 S E13-E15
 E WARD E/AU
 L16 40 S E3
 L17 77 S E23
 E WARD ELIZABETH/AU
 L18 32 S E3,E10,E11
 L19 1 S E12
 L20 29 S L4 AND L10-L19
 L21 12 S L20 AND (HALFLIVE OR HALFLIVE OR HALF() (LIFE OR LIVE))
 L22 524 S L4 AND (HALFLIVE OR HALFLIVE OR HALF() (LIFE OR LIVE))
 L23 26 S L21,L22 AND ?FCRN?
 E IGG/CT
 E E33+ALL
 L24 7702 S E2
 L25 1468 S E5
 L26 3366 S E7
 L27 14 S E9
 L28 1557 S E16
 L29 5 S E18
 L30 1918 S E24
 L31 1112 S E26
 L32 71072 S L4,L24-L31
 L33 616 S L32 AND (HALFLIVE OR HALFLIVE OR HALF() (LIFE OR LIVE))
 L34 26 S L33 AND ?FCRN?
 L35 1 S L33 AND RSV
 L36 120 S L32 AND RSV
 L37 1 S L36 AND L34,L35
 L38 3 S L33 AND ROUS SARCOM? VIR?
 E RESPIRATORY SYNEC/CT
 E RESPIRATORY SYNC/CT
 L39 980 S E5
 E E5+AL
 E E3+ALL
 L40 727 S E8
 L41 980 S E7
 E E6+ALL
 L42 2278 S E7,E6+NT
 L43 179 S L32 AND L39-L42
 L44 185 S L32 AND RESPIR? SYNCYT? VIR?
 L45 120 S L32 AND RSV
 L46 191 S L43-L44
 L47 4 S L33 AND L46
 L48 1 S L34 AND L46
 L49 4918 S L32 AND (LIGHT OR HEAVY) () CHAIN
 L50 268 S L49 AND VARIAB? (L) DOMAIN
 E MUTATION/CT
 L51 732 S E3-E42 AND L32
 E E3+ALL
 L52 736 S E1+NT AND L32
 E MUTAGEN/CT
 E E5+ALL
 L53 246 S E1+NT AND L32
 E MUTAGEN/CT

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L54      185 S E5-E10 AND L32
L55      943 S L51-L54
L56      8 S L55 AND L46
L57      377 S L55 AND L49
L58      27 S L55 AND L50
L59      8 S L55 AND ?FCRN?
L60      17 S L22 AND L55
L61      94 S L20,L21,L34,L47,L48,L56,L58-L60
L62      40 S L61 AND L22
L63      58 S L61 AND (PY<=2000 OR PRY<=2000 OR AY<=2000)
L64      11 S L20 NOT L63
          SEL DN AN 5
L65      1 S L64 AND E1-E3
L66      18 S L63 AND L20
L67      3132 S L32 (L) (LIGHT OR HEAVY) ()CHAIN
L68      18 S L67 AND L63
L69      3 S L63 AND CONSTANT DOMAIN
L70      194 S L32 AND CONSTANT DOMAIN
L71      12 S L70 AND L33
L72      2 S L70 AND L46
L73      3 S L70 AND ?FCRN?
L74      3 S L63 AND L70-L73
L75      180 S L68,L69,L70,L71 AND (PY<=2000 OR PRY<=2000 OR AY<=2000)
L76      19 S L75 AND L63
          SEL DN AN 5-7 9-13 15 18 19
L77      8 S L76 NOT E4-E36
          SEL DN AN 6 7
L78      6 S L77 NOT E37-E42
L79      7 S L65,L78
L80      69 S L63,L68,L69,L71-L74 AND (PY<=2000 OR PRY<=2000 OR AY<=2000)
L81      63 S L80 NOT L79
          SEL DN AN 6 7 10 15 16 18 26 31 34 37 38 44 46
L82      13 S L81 AND E43-E81
L83      20 S L79,L82
L84      22 S L20 NOT L83
L85      20 S L83 AND L1-L84
L86      20 S L85 AND (IGG# OR ?IMMUNOGLOB? OR CONSTANT DOMAIN OR MUTANT? O
L87      511 S L32 AND (TYR OR PHE OR TRP)
L88      1823 S L32 AND (TYROS? OR PHENYLALAN? OR TRYPTOPHAN?)
L89      2196 S L87,L88
L90      231 S L32 AND (251 OR 252 OR 253 OR 254 OR 255 OR 256)
L91      11 S L89 AND L90
L92      0 S L32 AND (TYR252 OR PHE252 OR TRP252)
L93      0 S L32 AND (TYR OR PHE OR TRP) () (251 OR 252 OR 253 OR 254 OR 255
L94      67 S L89,L90 AND L55
L95      0 S L86 AND L87-L94

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FILE 'HCAPLUS' ENTERED AT 14:53:34 ON 04 MAR 2004

FILE 'WPIX' ENTERED AT 14:54:43 ON 04 MAR 2004

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L96      1 S US20030190311/PN
L97      20946 S C07K016/IC,ICM,ICS
L98      16 S L97 AND ?FCRN?/BIX

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FILE 'MEDLINE' ENTERED AT 15:06:13 ON 04 MAR 2004

FILE 'WPIX' ENTERED AT 15:06:43 ON 04 MAR 2004

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L99      79 S L97 AND (RSV OR RESPIR? SYNC? VIR?)/BIX
L100     1 S L97 AND S28R/BIX
L101     1 S L97 AND ?A4B4?/BIX
L102     27 S L97 AND ((251 OR 252 OR 253 OR 254 OR 255 OR 256) (L) (TYR OR T
L103     20 S L97 AND ((251 OR 252 OR 253 OR 254 OR 255 OR 256) (S) (TYR OR T
L104     10 S L97 AND ((251 OR 252 OR 253 OR 254 OR 255 OR 256) (20A) (TYR OR

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                SEL DN AN 2 4
L105           2 S E82-E85
L106           0 S L99 AND L98
L107           2 S L96,L100,L101,L105
L108           2 S L107 AND L98-L107
L109          174 S L97 AND (HALFLIFE OR HALFLIVE OR HALF() (LIFE OR LIVE))/BIX
L110           7 S L109 AND L98
L111           2 S L109 AND L99
L112           9 S L108,L110,L111
                SEL DN AN 3 4 6 7 8 9
L113           6 S L112 AND E86-E98
L114           3 S L112 NOT L113
                E DALL ACQUA/AU
L115           3 S E6
                E DALLACQUA/AU
                E ACQUA/AU
                E JOHNSON L/AU
L116          116 S E3,E21
                E WARD E/AU
L117           24 S E3,E18
L118           19 S L97 AND L115-L117
L119           12 S L115-L117 AND (IGG OR IMMUNO GLOBULIN OR IMMUNOGLOBULIN)/BIX
L120           10 S L118 NOT L119
L121           24 S L113,L118-L120
L122          119 S L115-L117 NOT L121
L123           5 S L122 AND (RSV OR RESPIR? SYNC? VIR?)/BIX
L124           2 S L122 AND PNEUMON?/BIX
L125           6 S L122 AND RESPIR?/BIX
L126           7 S L123-L125
L127          31 S L121,L126

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FILE 'WPIX' ENTERED AT 15:18:55 ON 04 MAR 2004

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SET COST OFF

FILE 'HCAPLUS' ENTERED AT 13:35:55 ON 04 MAR 2004

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      E IGG/CW
L1      1 S E3
      E IGG/CT
      E E3+ALL
L2      30158 S E2
L3      57726 S IGG
L4      64123 S L2,L3
      E A4B4L1FR
      E A4B4
      E S28R
L5      0 S L4 AND E3
L6      0 S L4 AND ?S28R?
L7      2 S L4 AND S28
L8      0 S L4 AND ?A4B4?
L9      0 S L4 AND ?B4L1?
      E DALL ACQUA W/AU
L10     17 S E4
      E DALLACQUA W/AU
      E DALL A/AU
      E ACQUA/AU
L11     1 S E13
      E JOHNSON L/AU
L12     131 S E3
      E JOHNSON L S/AU
L13     16 S E3-E7
      E JOHNSON LESLIE/AU
L14     25 S E3,E12
L15     5 S E13-E15
      E WARD E/AU
L16     40 S E3
L17     77 S E23
      E WARD ELIZABETH/AU
L18     32 S E3,E10,E11
L19     1 S E12
L20     29 S L4 AND L10-L19
L21     12 S L20 AND (HALFLIVE OR HALFLIVE OR HALF() (LIFE OR LIVE))
L22     524 S L4 AND (HALFLIVE OR HALFLIVE OR HALF() (LIFE OR LIVE))
L23     26 S L21,L22 AND ?FCRN?
      E IGG/CT
      E E33+ALL
L24     7702 S E2
L25     1468 S E5
L26     3366 S E7
L27     14 S E9
L28     1557 S E16
L29     5 S E18
L30     1918 S E24
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L32     71072 S L4,L24-L31
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L35     1 S L33 AND RSV
L36     120 S L32 AND RSV
L37     1 S L36 AND L34,L35
L38     3 S L33 AND ROUS SARCOM? VIR?
      E RESPIRATORY SYNEC/CT
      E RESPIRATORY SYNC/CT

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L39      980 S E5
          E E5+AL
          E E3+ALL
L40      727 S E8
L41      980 S E7
          E E6+ALL
L42      2278 S E7,E6+NT
L43      179 S L32 AND L39-L42
L44      185 S L32 AND RESPIR? SYNCYT? VIR?
L45      120 S L32 AND RSV
L46      191 S L43-L44
L47      4 S L33 AND L46
L48      1 S L34 AND L46
L49      4918 S L32 AND (LIGHT OR HEAVY) () CHAIN
L50      268 S L49 AND VARIAB? (L) DOMAIN
          E MUTATION/CT
L51      732 S E3-E42 AND L32
          E E3+ALL
L52      736 S E1+NT AND L32
          E MUTAGEN/CT
          E E5+ALL
L53      246 S E1+NT AND L32
          E MUTAGEN/CT
L54      185 S E5-E10 AND L32
L55      943 S L51-L54
L56      8 S L55 AND L46
L57      377 S L55 AND L49
L58      27 S L55 AND L50
L59      8 S L55 AND ?FCRN?
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L88      1823 S L32 AND (TYROS? OR PHENYLALAN? OR TRYPTOPHAN?)
L89      2196 S L87,L88

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